

### Transcript Details

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## Unraveling the Role of Adjuvanted Flu Vaccines for Older High-Risk Patients

### ReachMD Announcer:

Welcome to ReachMD.

This medical industry feature, titled "Unraveling the Role of Adjuvanted Flu Vaccines for Older High-Risk Patients," is sponsored by CSL Seqirus.

Here's our guest, Dr. Stephen Pelton.

### Dr. Pelton:

As if the aging process didn't already take enough from us, it also gradually takes away our immune system function through immunosenescence.

Influenza disproportionately affects adults 65 and older as a result of increased frequency of comorbidities and immunosenescence.<sup>1</sup>

Influenza infection is also linked to neurologic, cardiovascular, and respiratory complications in high-risk groups. Influenza can exacerbate underlying chronic medical conditions such as congestive heart failure and chronic obstructive pulmonary disease.<sup>1</sup>

So with that being said, the burden of influenza disease between 2010 and 2020 is estimated to have caused 140,000 to 710,000 hospitalizations, and 12,000 to 52,000 deaths in the United States annually.<sup>2</sup> And in the last two pre-pandemic seasons—or the 2018-2019 and the 2019-2020 seasons—approximately half of the hospitalizations, and between two-thirds to three-quarters of the deaths from influenza in the United States were in adults 65 and older.<sup>1,2</sup>

So in June 2022, the Advisory Committee on Immunization Practices preferentially recommended adjuvanted and higher-dose influenza vaccines for persons 65 years and older.<sup>2</sup>

My colleagues and I studied the impact that influenza vaccination has on influenza disease severity, especially in the presence of underlying medical conditions. We wanted to evaluate if vaccines prevented complications linked to influenza in this vulnerable population, and determine the impact that influenza vaccines have on the most severe outcomes, such as myocardial infarction, stroke, deterioration in chronic obstructive pulmonary disease, and death.<sup>1</sup>

We conducted an analysis to estimate the reduction in influenza severity following influenza immunization.<sup>1</sup> What we did was model the potential impact of adjuvanted quadrivalent influenza vaccines versus standard egg-based vaccines on hospitalizations and mortality in the adults 65 year and older population in the U.S., compared to a hypothetical cohort of no vaccination at all. And this was based on pre-COVID-19 pandemic seasonal flu surveillance data.<sup>1</sup>

In patients with symptomatic influenza, we looked at hospitalizations from underlying cardiovascular disease, chronic respiratory disease, and from all other causes using a modeling approach to account for some uncertainty we faced around the input parameter estimates.<sup>1</sup>

This approach allowed us to use a range of values for potential vaccine effectiveness, attack rates, and probabilities of events. Our model helped us to estimate the rates of hospitalizations and mortality on each of these outcomes in those who were unvaccinated versus vaccinated with either the adjuvanted influenza vaccine or a standard egg-based alternative.<sup>1</sup>

We found that the use of either the adjuvanted influenza vaccine or a standard influenza vaccine would lead to a large reduction in hospitalizations and deaths. In fact, up to about 270,000 hospitalizations and as many as 29,000 deaths could be averted.<sup>1,2</sup>

We also found incremental differences between the two vaccines. We estimated that the adjuvanted influenza vaccine prevented an additional 1,071 to 18,388 hospitalizations and an additional 85 to 1,944 deaths—when compared with standard vaccines—across the three evaluated outcomes.<sup>1</sup>

Now because of the variable nature of influenza across seasons, differences in published estimates, and the variations in input parameters, we presented data as the 95 percent confidence intervals.<sup>1,2</sup>

And while our analysis indicates that there could potentially be an incremental reduction in hospitalizations and mortality rates following adjuvanted influenza vaccination compared with standard egg-based vaccines, it is difficult to precisely estimate the potential benefits of the two vaccines. Additionally, one limitation of our study was that we only included older adults with pre-existing comorbidities.<sup>2</sup>

So as you can see, routine seasonal vaccination against influenza can prevent a substantial number of severe influenza-associated complications and deaths from exacerbation of chronic conditions in adults 65 and older, with the highest impact from the adjuvanted vaccine.<sup>2</sup>

Our analysis provides insight into the potential impact of influenza vaccinations in reducing cardiovascular, respiratory, and other complications of influenza in this vulnerable patient population with underlying chronic conditions.<sup>2</sup>

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Data for FLUAD<sup>®</sup> QUADRIVALENT are relevant to FLUAD because both vaccines are manufactured using the same process and have overlapping compositions.

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**FLUAD<sup>®</sup> (Influenza Vaccine, Adjuvanted)**

**INDICATION AND IMPORTANT SAFETY INFORMATION**

**INDICATION AND USAGE**

FLUAD is a vaccine indicated for active immunization for the prevention of influenza disease caused by influenza virus subtypes A and type B contained in the vaccine. FLUAD is approved for use in adults 65 years of age and older.

This indication is approved under accelerated approval based on the immune response elicited by FLUAD. Continued approval for this indication may be contingent upon verification and description of clinical benefit in a confirmatory trial.

**IMPORTANT SAFETY INFORMATION**

**CONTRAINDICATIONS**

Do not administer FLUAD to anyone with a history of a severe allergic reaction (e.g., anaphylaxis) to any component of the vaccine, including egg protein, or to a previous influenza vaccine.

**WARNINGS AND PRECAUTIONS**

If Guillain-Barré Syndrome (GBS) has occurred within six weeks of previous influenza vaccination, the decision to give FLUAD should be based on careful consideration of the potential benefits and risks.

Appropriate medical treatment must be immediately available to manage potential anaphylactic reactions following administration of FLUAD.

Syncope (fainting) may occur in association with administration of injectable vaccines including FLUAD. Procedures should be in place to avoid injury from fainting.

The immune response to FLUAD in immunocompromised persons, including individuals receiving immunosuppressive therapy, may be lower than in immunocompetent individuals.

Vaccination with FLUAD may not protect all vaccine recipients against influenza disease.

**ADVERSE REACTIONS**

The most common (≥10%) local and systemic adverse reactions in ≥adults 65 years of age and older who received FLUAD were injection site pain (25%), injection site tenderness (21%), myalgia (15%), fatigue (13%) and headache (13%).

Other adverse events may occur.

To report SUSPECTED ADVERSE REACTIONS, contact CSL Seqirus at 1-855-358-8966 or VAERS at 1-800-822-7967 and [www.vaers.hhs.gov](http://www.vaers.hhs.gov).

Before administration, please see the full US Prescribing Information for FLUAD.

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This program was sponsored by CSL Seqirus. If you missed any part of this discussion, visit Medical Industry Features on ReachMD.com. This is ReachMD. Be Part of the Knowledge.

**References:**

1. Pelton SI, Nguyen VH, Mould-Quevedo JF. The value of influenza vaccination in the older adult population. A stochastic model estimation of the benefit of vaccination to prevent the severe outcomes in the U.S. Poster presented at: IDWeek 2023; October 11-15; Boston, MA.
2. Pelton SI, Mould-Quevedo JF, Nguyen VH. The impact of adjuvanted influenza vaccine on disease severity in the US: a stochastic model. *Vaccines*. 2023; 11(10):1525. <https://doi.org/10.3390/vaccines11101525>

USA-FLUD-24-0038 August 2024